DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021982
Date Inspected: 17-Mar-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See Below		**CWI Present:**	☑ Yes	☐ No
Inspected CWI report:	☐ Yes	☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No ☐ N/A
Electrode to specification:	☑ Yes	☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No ☐ N/A	**Approved WPS:**	☑ Yes	☐ No ☐ N/A
			Delayed / Cancelled:	☐ Yes	☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG

Summary of Items Observed:

CWI Inspector: Mr. Cui Zheng Hua

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Yang Yunfeng, stencil 215553 used shielded metal arc welding procedure WPS-B-P-2212-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019BB-083. This QA Inspector observed a welding current of approximately 240 amps the base materials were preheated with an electrical heater and Mr. Yang Yunfeng appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wang Zhengbin, stencil 216086 used shielded metal arc welding procedure WPS-B-P-2212-TC-U4B-FCM-1 to make OBG segment 14E weld SEG3019BB-149. This QA Inspector observed a welding current of approximately 240 amps the base materials were preheated with an electrical heater and Mr. Wang Zhengbin appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhao Guanglin, stencil 044779 used shielded metal arc welding procedure specification WPS-345-SMAW-4G(4F)-FCM-Repair-1 to make OBG segment 14E repair weld SEG3019Y-053. ZPMC QC informed this QA Inspector that weld repair document B-WR-19719 documents this weld repair. This QA Inspector observed a welding current of approximately 190 amps, the base materials were preheated with an electrical heater and Mr. Zhao Guanglin appeared to be certified to make this weld. Later in the shift this QA Inspector observed Mr. Zhao Guanglin performing welding of welds SEG3019S-125 and 126. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Kuai Wenshan, stencil 054013 used shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-FCM-Repair-1 to make repairs of weld OBG segment 14E weld SEG3019Y-053. ZPMC QC informed this QA Inspector that weld repair document B-WR-19719 documents this weld repair. Later in the shift this QA Inspector observed Mr. Kuai Wenshan performing repairs of weld SEG3019M-244 in accordance with weld repair document BWR-20359 and welds SEG3019S-118 & 119. This QA Inspector measured a welding current of approximately 190 amps, base materials were preheated with a torch and Mr. Kuai Wenshan appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

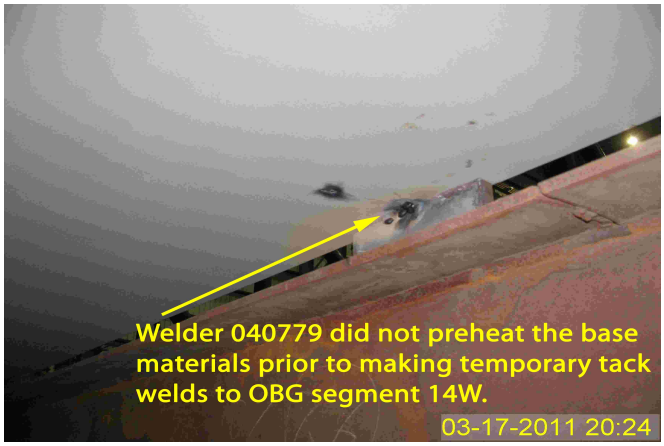
This QA Inspector observed ZPMC welder Mr. Wang Linjiang stencil 051356 used flux cored welding procedure WPS-B-T-2231-ESAB to make OBG segment 14E weld SA3013A-001-086. ZPMC QC informed this QA Inspector that weld repair document B-WR-19719 documents this weld repair. This QA Inspector observed a welding current of approximately 310 amps and 32.1 volts and Mr. Wang Linjiang appeared to be certified to make his weld. This QA Inspector observed the maximum welding voltage listed in the welding procedure specification is 26.6 volts and Mr. Wang Linjiang had a welding current that was approximately 4.5 volts above this maximum limit. This QA Inspector showed ABF CWI Mr. Cui Zheng Hua a photograph of the welding meter and he had the welding machine adjusted to have a voltage of approximately 26.0 volts. Following adjustment of the welding machine, items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

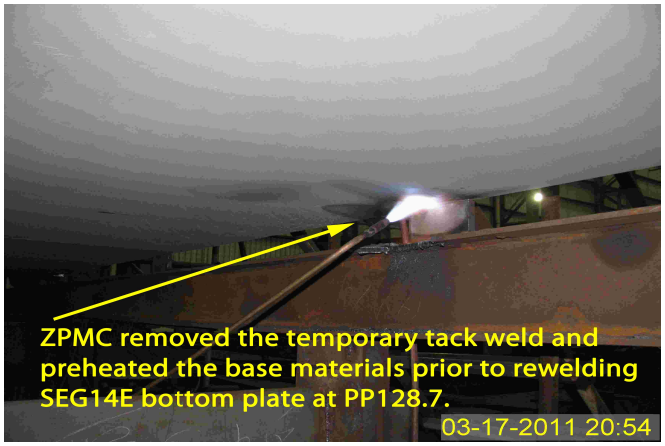
This QA Inspector observed ZPMC welder Mr. Wu Wanyong stencil 050242 used flux cored welding procedure WPS-B-T-2232-ESAB to make OBG segment 14E welds DP3165-001-006, 007 and 008. This QA Inspector measured a welding current of approximately 320 amps, 26.5 volts, the base materials were preheated with electrical heaters and Mr. Wu Wanyong appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Wu Qingqing, stencil 040779 used shielded metal arc welding process to make a tack weld between a temporary spacer plate on OBG segment 14E bottom plate near panel point PP128.7. This QA Inspector observed a welding current of approximately 150 amps the base materials did not appear to have been preheated prior to welding. This QA Inspector informed ABF QC Inspector Mr. Jiang Zi Wen that this tack weld appears to have been made without any base material preheating. ZPMC workers then got a torch and used it to preheat the base materials where other tack welds were to be installed. A few minutes later Mr. Wu Qingqing showed this QA Inspector that he had removed the tack weld that had been made without preheat and this area was preheated prior to welding. Mr. Wang Zhengbin appeared to be certified to make this weld. See the photographs below for additional information

WELDING INSPECTION REPORT

(Continued Page 3 of 3)





Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey +8615000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer